FINAL ENVIRONMENTAL ASSESSMENT

PROPONENT:	Schellinger Construction	**SITE NAME:**	Carlson Gravel Pit
LOCATION:	Section 21, T30N, R21W	**COUNTY:**	Flathead

TYPE AND PURPOSE OF ACTION:

Schellinger Construction proposes to amend its existing gravel mining permit to add an additional 89.1 acres, increasing the total permit area to 156.3 acres. The site is east of Whitefish Stage Road and north of Hodgson Road and is a long-term asphalt, concrete and aggregate business formerly operated by Carlson Sand and Gravel (see Figure 1 – Area Map). An additional volume of 9,300,000 cubic yards would be extracted from the new area. Material mined from the new area would be excavated and transported to existing processing facilities within the existing permit (see Figure 2 – Site Map). This area is being included in the permit primarily to supply more gravel resources. Land in the original permit, which has been mined to the currently approved 3,000 feet MSL and is no longer needed for mining operations, would be reclaimed as pasture. Reclaimed land would be graded smooth with slopes no steeper than 3:1, re-soiled and seeded to grass. Mining would progress eastward into the amendment area in five separate phases, beginning with areas 1 and 2. Mining these first two areas in the five-area phase sequence would raise the Reclamation Bond to $782,015. The DEQ Zoning Compliance Form for this amendment was signed by Flathead County Planning and Zoning on March 31, 2008. Final reclamation would be completed by October 2046. Hours of Operation would be changed to include Saturdays, and early start times at 5:30 a.m. for the concrete plant only. Maintenance and other nighttime work would be discontinued. Most other aspects of the existing permit would remain the same.

This environmental assessment (EA) is required under the **Montana Environmental Policy Act (MEPA)**. An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit on which the state must make a decision, so that an informed decision can be made. MEPA sets no environmental standards, even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required mitigation measures or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow DEQ or any other state agency to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the **Opencut Mining Act**. This law and its approved rules place operational guidance and limitations on a project during its life, and provide for the reclamation of land subjected to opencut materials mining. This law requires that a surety bond, cash deposit or other financial instrument be submitted to the state to cover the complete costs of reclaiming the site to its approved, post-mining land use, if the permittee fails to reclaim the site as required by the law, the rules, and the permit.

The permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to his proposed actions.

PUBLIC COMMENTS/QUESTIONS AND DEQ RESPONSES

This EA responds to comments and questions submitted by the public. Comments were combined by topic and paraphrased below, as necessary, for efficiency and convenience.

AESTHETICS

Public Comment/Question: The berm along Whitefish Stage Road was planted with trees, some of which have died. These must be replaced and maintained with live trees.

DEQ Response: DEQ agrees and will require replacement and maintenance of the dead trees.

Public Comment/Question: This pit was there when I moved in 33 years ago, and I see no problem with it. We live northeast of the pit and don't see dust or have problems with noise from this operation.

DEQ Response: Comments noted.

Public Comment/Question: Reclamation of this site will succeed and land will be productive just like the reclaimed Iron Horse and Flathead County pits adjacent to the north.

DEQ Response: Based on the success of reclamation efforts of mined areas adjacent to this site, final reclamation should return the land to productive pasture for livestock (See Section 1 – GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE).

Public Comment/Question: The deterioration of aesthetics during operation is not acceptable because the site would not be reclaimed until the year 2056. Forty eight years into the future is unreasonable. The EA describes this as "short term" which is not true. Impacts are long term, not "temporary deterioration" as stated in the Draft EA.

DEQ Response: Under existing statutes, the operator must only specify a date within which reclamation will be completed. However, in the revised Plan of Operations described below in "Agency Preferred Alternatives", the 2056 timeframe has been shortened to 2046. The term "temporary deterioration", as used to describe long term visual impacts, has been eliminated.

Public Comment/Question: The site will look like many other undesirable mine sites in the valley. It amounts to general scarring of the valley and it ruins the typical rural-type scenery.

DEQ Response: DEQ understands that an opencut operation can create a substantial visual impact. DEQ worked with the proponent to develop a plan to minimize the visual impact (See Section 8 - **AESTHETICS**) and has received a revised Plan of Operation that further mitigates aesthetic impacts by adjusting the acreage in the requested permit expansion, and by decreasing the number of years that the operation will be extended (see Agency Preferred Alternatives below).

Public Comment/Question: Noise is not desirable. Noise will be detrimental to the area. Noise impacts must be adequately addressed and mitigated. Need a plan for quiet times between 5 and 7 a.m. Operator must stop back up beepers and crusher/wash plant early in the mornings. Sound levels estimated in the EA are not from real data taken at the pit. Should have measured decibel levels in a radius around the site, and set limits based on measured data. A Saturday operation is a huge impact on time off for local residents.

DEQ Response: DEQ agrees that noise is not desirable, especially in a rural setting. The requested amendment would only apply to batching concrete, not to crushing or washing gravel, and only between the hours of 5:30 a.m. to 7:00 a.m. weekdays, and 5:30 to noon on Saturdays. DEQ worked with the proponent to develop a plan to minimize the noise impact (See Section 8 - **AESTHETICS**).

Public Comment/Question: This site is located in an area that is relatively less populated compared to other gravel resources in the valley. Therefore, this is a good choice for a pit since impacts on residential use across the valley would be reduced. Expanding this site would have less of an impact than opening up a new pit.

DEQ Response: Comments noted. Compared to other incorporated and unincorporated development sites in the Flathead Valley, the site is in a lightly developed, semi-rural setting.

Public Comment/Question: The Carlson pit helps tourism by keeping this industrial site convenient to Whitefish but still hidden away from Highway 93 and Highway 40 where the majority of tourists go.

DEQ Response: Comment noted.

Public Comment/Question: Berms placed along the highway have old unsightly irrigation wheels and pipe laying in plain view.

DEQ Response: These irrigation pipes were placed strategically along the berms specifically to prevent ATV and motorcycle vandalism. Without some physical barrier, irresponsible riders soon track and cut deep gullies in the berm slopes, which become erosive and contribute sediment and noxious weeds in the drainage ditches along the highway. Irrigation lines are a common part of the agricultural landscape, and when used in this manner, are less visually offensive than barbed wire. They are also used for occasional irrigation of the berm vegetation during droughty conditions. Much experience dealing with vandals has proven this to be an effective and non-lethal control method (Carlson pers. comm. 2006).

Public Comment/Question: Sound levels estimated in the EA are not from real data taken at the pit. DEQ should have measured decibel levels in a radius around the site, and set limits based on measured data.

DEQ Response: There are no state or federal laws that address sound levels other than safety regulations for the workers on site. DEQ understands the issues related to sound and can help address these concerns through setting permitted hours of operation and by requiring construction of sound-deflecting berms and vegetation (See Section 8 – **AESTHETICS** and Section 11 – HUMAN HEALTH AND SAFETY).

Public Comment/Question: Require a 1,000 foot buffer between the pit and surrounding property boundaries.

DEQ Response: DEQ currently does not have the legal authority to provide such a buffer. In Montana, the authority to resolve land use issues is vested with local government.

Public Comment/Question: The easternmost extent of the proposed expansion is only 200 feet from Whitefish River, not 1/4 mile as the Draft EA said.

DEQ Response: The Whitefish River is actually 750 east of the closest point of the proposed expansion (See Figure 1 - Area Map and Section 2 – WATER QUALITY, QUANTITY AND DISTRIBUTION). The ½ mile value used in the Draft EA was the distance from the river to the proposed expansion including all five phases. At the closest, the amended permit boundary would be up on a bench at least 60 to 80 vertical feet above the river, and those disturbances would be mainly seeded soil berms. It is unlikely that aesthetic impacts would be significant as a result of the far eastern boundary of the proposed expansion.

AIR QUALITY

Public Comment/Question: Air quality will be degraded by dust beyond the permit boundary. It needs to be specifically addressed how dust would not further degrade the air quality and violate EPA standards. Dust covering subdivisions and roadsides along Whitefish Stage Road is from heavy trucking. Dust statements in EA appear to contradict each other. "..dust will occur.." vs. "..dust will not increase..". Air quality decreases during summer especially with windows open, dust coming in. They need a baghouse or other filter system to eliminate dust from the asphalt plant.

DEQ Response: The crushing operation, asphalt plant, and concrete plant must comply with state air quality standards and permitting requirements. These plants would require air quality permits from the DEQ's Air Resources Management Bureau. The air quality permits would limit emissions of particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and volatile organic compounds (VOCs). The air quality permits issued by DEQ include opacity limitations and require using emissions control devices such as water and spray bars for dust control. Air quality rules also require reasonable precautions to control fugitive dust. These requirements protect air quality and human health. DEQ worked with the proponent to develop a plan to minimize particulate matter (dust). (See Section 3 – AIR QUALITY). The existing mining permit already allows operation of all of the above mentioned facilities. The level of dust produced at this site would not increase due to the continued operation of the crusher, wash plant, concrete and asphalt plants. There could be additional dust caused by stripping topsoil from more acres of land. However, the operator is required to begin reclamation on all lands no longer needed for mining or mine-related activities.

Dust covering the vegetation along the State Highway that may be caused in part by trucks entering and leaving the site does not fall under the jurisdiction of the DEQ. Reasonable dust control measures to prevent off site impacts have been put in place within the existing permit and include paving the approach to the highway, watering or chemically dust-abating internal roads, seeding soil piles to grass, building vegetated berms along the highway, spray bars on the crusher, and a hard stop at the exit to slow truck traffic down.

Public Comment/Question: Air quality will be degraded by asphalt fumes and the emissions are carcinogenic. Monitoring and inspections should be done by third parties and air quality must be monitored for dust and hydrocarbons in real-time by third party.

DEQ Response: DEQ's ARMB writes permits for asphalt plants. Generally, ARMB establishes permit limitations on facility production and/or hours of operation of the equipment to minimize emissions. The use of such limitations to regulate the criteria pollutants (total particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM10), oxides of nitrogen (NOx), volatile organic compounds (VOC), carbon monoxide (CO), and oxides of sulfur (SOx)) also minimizes the amount of hazardous air pollutant (HAP) emissions. The facility used may also use pollution controls that could further reduce emissions, and pollution control equipment may be specified as an operational requirement in the Air Quality permit.

The amount of HAP's from an asphalt plant can be calculated by using the U.S. Environmental Protection Agency's emission factors for batch mix and drum mix asphalt plants (currently AP-42, Table 11.1-9 through Table 11.1-16). Using these tables, the calculation of HAP's is based upon the amount of product a facility is allowed to produce and the method through which the product is generated.

Montana's standards for acceptable emissions are health-based standards and comply with federal guidelines. Asphalt plants that are permitted with the state are permitted in the manner described above and typically generate relatively small amounts of HAP's in relation to the corresponding major source threshold. The major source threshold for HAP's in the Federal Clean Air Act, section 112(a)(1), is defined as 10 tons per year or more of any HAP's or 25 tons per year or more of any combination of HAP's.

The operator is required to meet both the testing and operational requirements of the air quality permit. ARMB may require additional testing. The potential penalty for a violation is $10,000 per day per violation. ARMB performs inspections of these facilities and may initiate enforcement action on those facilities that are in violation of the air quality rules and standards contained in their air quality permits.

CUMULATIVE IMPACTS

Public Comment/Question: The Draft EA did not address the cumulative impacts of having two other asphalt plants and other crushers within several miles of this site, and the chronic problems with dusty county roads. Other operating gravel pits to the east of this site contribute to the dust and odors in the area.

DEQ Response: Analysis of the impacts of this proposed amendment on air quality and sound levels at the site shows that the other sources of sound and particulates are far enough away and in a direction relative to prevailing winds that the cumulative impacts would be negligible. The other area crushers/asphalt plants are located generally about two miles east or four miles southeast of Carlson. During the majority of the time Carlson should have no cumulative impact with these other portable plants since the wind tends to blow north/south 80% of the time, and will therefore not bring any entrained particulates to or from the other portable plants. It is highly unlikely that odors from the other asphalt plant two miles away would be detectable at any given location at the same time as odors from the Carlson site. Furthermore, since the closest portable facilities are two miles from Carlson, it is reasonable to expect that there would be little, if any, cumulative impact even during the 20% of the time when the wind would blow to or from one of the other plants (See Section 8 - AESTHETICS and Figure 3 – Glacier Park International Airport Wind direction Charts).

DEQ OVERSIGHT

Public Comment/Question: The local DEQ is not characterized as promptly and effectively responding to air quality problems. Complaints in the past have been dismissed. No confidence the future will be better.

DEQ Response: All DEQ programs respond to problems and complaints that are within their jurisdiction as soon as they are able. Complaints may be registered with DEQ's Enforcement Division or the respective program. A person wanting information about DEQ enforcement activities (violations) should contact the Enforcement Division (http://www.deq.mt.gov/enf/contacts.asp or 406-444-0379).

Public Comment/Question: The size of the pit must be listed at any given time in the Plan of Operation. It must have a reclamation schedule. DEQ must monitor reclamation timelines, and the permit must dictate the reclamation schedule.

DEQ Response: DEQ requires a Plan of Operation as part of the permitting process (See Section 1 - GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE). The Plan for the Carlson amendment adequately addresses reclamation timeframes by stating that the proposed new area would be mined in phases with reclamation to follow as depleted areas are no longer needed. There is no provision in the Opencut Mining Act for the DEQ to impose structured timeframes on reclamation, which are driven by product sales and market conditions. In 82-4-434(3)(k), MCA, the Act states: "...reclamation will be as concurrent with the opencut operation as feasible and will be completed within a specified length of time." Further, the Opencut Rules at ARM 17.24.219(1)(f) include a reference to timeframes stating: "…the operator will complete all reclamation work on an area no longer needed for opencut operations, or that the operator no longer has the right to use for opencut operations, within one year after the cessation of such operations or termination of such right. If it is not practical for the operator to reclaim a certain area until other areas are also available for reclamation, the operator may propose an alternate reclamation deadline for that area…" and that the plan must include "…a reasonable estimate of the month and year by which final reclamation will be completed considering the estimated mine material demand, expected rate of production, and accessible mine material reserves." Reclamation is specified in the Plan to be completed by the year 2046. The DEQ would conduct periodic inspections of the site to ensure that those timeframes are met.

Public Comment/Question: The Opencut Program Audit Report from the Legislative Auditor's Office says that the DEQ is unable to adequately regulate gravel pits due to staffing and funding problems, so it should grant a total statewide moratorium on issuing further mining permits and amendments such as this one until it is capable of regulating and monitoring adequately.

DEQ Response: DEQ continues to administer the Opencut Mining Program at its current staff and funding levels as required by law and has no authority to implement any such moratorium on mining permits and amendments. The Program is in the process of making some changes to implement the legislature's audit recommendations.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY

Public Comment/Question: Mining gravel from this site saves fuel and reduces the carbon footprint of localized projects.

DEQ Response: A carbon footprint is a measure of the impact our activities have on the environment, and in particular climate change. It relates in this case to the amount of greenhouse gases produced through burning fossil fuels for aggregate transportation. A carbon footprint is a measurement of greenhouse gases produced in units of tons of carbon dioxide equivalent. For example, a loaded dump truck that averages 4 miles per gallon travelling 10,000 miles per year would produce 25 ton equivalents of CO2. For comparison, a typical family of 4 living in a 4-bedroom house in Montana produces approximately 45 tons of CO2 equivalents per

year. Carbon footprints are frequently tallied for personal home operation or complete construction projects such as house or commercial building, street and parking lots and highway construction. There are theoretical ways of mitigating this quantified carbon footprint by conserving fuel elsewhere or by purchasing carbon offsets on the open market that offer green opportunities such as funding reforestation in Africa, or planting trees. See more details on carbon footprints and the carbon footprint calculator on the DEQ website at: http://deq.mt.gov/ClimateChange/Education/CarbonFootprintCalcs.asp.

It is logical that having a shorter hauling distance would reduce fuel consumption, and reduced fuel consumption would translate into a reduced carbon footprint for any typical construction project that requires aggregates. The degree to which this amendment would reduce the carbon footprint of any construction project is not known.

Public Comment/Question: Concrete is a "green" product since the cement manufacturing plants are located outside the valley. Concrete mixed here emits little pollution.

DEQ Response: DEQ recognizes the distinction between cement batching and cement manufacturing. Manufacturing cement requires a substantial amount of energy such as natural gas or fuel oil to fire the kilns necessary to convert native limestone and clay into packaged cement. When limestone is heated to 540º C, a process known as calcining, carbon dioxide is driven off leaving anhydrous calcium oxide or quicklime (calcium hydroxide), a caustic alkaline substance. Cement plants are usually located next to limestone quarries where fuels are economically available, and the emissions from the heating process can include such things as fly ash, nitrogen oxides (NOx) and sulfur oxides (SOx) formed from the combustion of the fuel, and oxidation of sulfur present in the raw materials. Heavy metals may also be present in the raw materials and fuel used, and are released in kiln gases.

Batching concrete however, as is done at this site, is simply mixing of the manufactured cement with water and washed sand and rock. Delivery trucks are filled with these basic components from overhead bins, which are mixed by rotating the large drum on the back of the truck on the way to the jobsite. Since the filling process uses water as part of the concrete mix, there is little emission of dust once the materials are combined together. There is some dust generated at the batching site by minor spillage around the truck load-out, by trucks entering and leaving, and by front-end loaders filling the bins. Returning trucks are rinsed out and cleaned immediately to prevent cement from hardening inside the equipment. Wash-out areas are usually designated depressions or ponds that contain the waste material. As this waste hardens, it is cleaned out by ripping the hard sediment into slabs, which are then buried as inert fill in the pit.

The pH of the groundwater is routinely measured in the field at the time water-quality samples are collected from the five monitoring wells. The pH values have historically ranged from 7.1 to 8.1; this range of values is consistent with the general water quality conditions in the valley. This range of pH indicates the groundwater is slightly buffered, which is attributed to the aquifer host rock being composed of limestone and dolomite. Most groundwaters found in the United States have pH values ranging from about 6.0 to 8.5. To date, there has not been a noticeable change in the pH in any of the monitoring well samples.

MEPA

Public Comment/Question: Analysis of the issues is limited to professional opinion (local DEQ rep in Kalispell) instead of scientific study. An adequate environmental review needs third party work. MEPA standards must be met before a decision can be made. The Draft EA fails to meet MEPA standards and lacks objective scientific study. Having one DEQ individual write the EA and regulate the permit is a conflict of interest.

DEQ Response: The Montana Environmental Policy Act (MEPA) requires a disclosure process, not a scientific study nor a decision-making process. Its intent is to reveal existing information about the proposal and the environment, identify impacts, and provide this information to interested persons. It reveals the material DEQ uses to make decisions pursuant to the state laws DEQ administers.

Public Comment/Question: An EIS should be done, not an EA.

DEQ Response: An EIS is only performed if there are significant impacts found that cannot be mitigated below the level of significance. This final EA indicates that all impacts of this operation will be adequately mitigated.

Public Comment/Question: DEQ did not follow MEPA in its analysis of this proposed amendment.

DEQ Response: Changes were made to the Draft document to correct errors, add mitigations and new permit conditions, and modify Schellinger's Plan of Operation. These are all items either required or allowed under MEPA. See other MEPA comments and

questions above for more information about EIS's, public notification, and permit conditions.

Public Comment/Question: The public notice process used by DEQ failed to serve notice to ALL landowners in the area.

DEQ Response: DEQ tries to provide notice to as many persons as possible. The regulations for distributing an EA range widely, and are not as specific as notice for EISs. The DEQ advertised the availability of the EA in a prudent and adequate manner under current statutes. There is no requirement for DEQ to notify adjacent landowners in the vicinity of a proposed operation in the Opencut Mining Act although DEQ provides the applicant with an optional Landowner Notification form to give landowners within 1,000 feet of the permit boundary. Schellinger has met with adjacent landowners to consult them on ways to mitigate the impacts of the operation. Those consultations were used to formulate the revised Plan of Operations (Pers. Comm. with Schmidt 2008).

Public Comment/Question: Do an EIS. Greg Hallsten said one is needed in his public meeting in Kalispell last year. We have not seen his EIS.

DEQ Response: DEQ did propose to do a programmatic EIS on gravel pits in the Flathead area at a public meeting in Kalispell in June 2006, but was unable to generate sufficient interest in funding the review.

OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES

Public Comment/Question: Schellinger is an independent operator, and will protect us from big company monopolies that would eventually raise prices for gravel. This pit expansion is vital to economic stability in the Flathead Valley. More pits in this part of the valley make aggregates more affordable. Locals buy gravel from this pit and appreciate a source near them.

DEQ Response: DEQ agrees that, from a purely economic standpoint, having more gravel pits available in this part of the valley and having more of the aggregate resources available could have a moderating effect on prices. Other comments noted.

Public Comment/Question: Shrinking gravel deposits in this area make it critical that we must use this resource.

DEQ Response: Comment noted.

Public Comment/Question: Fuel cost savings occur with the use of a local source of gravel.

DEQ Response: DEQ agrees that there may be fuel cost savings when aggregates from this site are used locally as opposed to purchasing and transporting materials from locations further away.

Public Comment/Question: The impacts of wear and tear on roads are reduced by having a local source. Hauling aggregates into the developing Whitefish area from gravel sources elsewhere places unnecessary heavy truck traffic on our road systems.

DEQ Response: DEQ agrees that there may be reduced impacts on local road systems as a result of having access to a closer gravel product source.

Public Comment/Question: Longer summer hours make up wages and income for short winter hours in Montana. The construction season is relatively short and limited to the summer months. Montana workers must deal with the accelerated schedules of summer construction by working longer hours and then being laid off during the winters. Financial impacts of this amendment, especially the extended concrete batching schedule during early morning hours and the extended life of the mine into the future are positive for the state work force in this area.

DEQ Response: Comments noted.

Public Comment/Question: Schellinger and Carlsons give generous donations of time, materials and services to the community. Schellinger has been very responsive to our concerns even though they are mining and processing gravel products in our community.

DEQ Response: Comments noted.

SOCIO-ECONOMICS

Public Comment/Question: Land destruction by mining this additional area is just not right. There are already too many gravel pits in the valley. Land use as a gravel pit is incompatible with rural residential development in this area.

DEQ Response: This gravel pit is located in an area that is currently not zoned. The applicant submitted a zoning compliance form to DEQ signed by the Flathead County Zoning and Planning office in April 2008 stating that the proposed permit amendment area is not zoned. Therefore, there is no prohibition against this type of use for the property. Under the Opencut Mining Act, any party has the right to apply for an Opencut permit or amendment on any site at any time, if the land is zoned such that this activity is allowable. The Act does not allow DEQ to limit the number of Opencut operations in a given area or make permit decisions based on a perceived lack of "need" for additional operations, on who will and will not benefit from a proposed operation, on whether a proposed operation fits the character of an area, or on the popularity of a proposed operation. DEQ is required to evaluate a proposed Opencut mining operation based on the requirements of the Act and rules. Mitigation measures may be required to reduce certain on- and off-site impacts, and this has been done with this amendment application. DEQ is obligated to grant the amendment to the applicant, if the application adequately addresses the requirements of the Act and rules. DEQ believes that potential off-site impacts of this operation would be reasonably mitigated within the limits provided by state law.

Issues raised with respect to: a) the stated lack of compatibility of a long-term mining operation with the local community, b) the proposed mining operation making the Flathead Valley a less desirable place to reside, c) allowing mining operations to dot the area is poor planning, and d) the perceived need for rezoning populated areas appropriately in Flathead County, are issues over which DEQ has no authority under the Act. These are issues that must be addressed at the local level, i.e., with Flathead County government. The county can prohibit sand and/or gravel mining in an area zoned as residential, and can impose reasonable conditions on an operation in all zones other than residential. The Flathead County Planning & Zoning Office should be contacted about further or continuing planning and zoning issues.

Public Comment/Question: Property values outside the pit suffer; Carlson and Schellinger make tons of money.

DEQ Response: Under the Opencut Mining Act, any party has the right to apply for an Opencut permit on any site at any time, if the land is zoned such that this activity is allowable. The Act does not allow DEQ to limit the number of Opencut operations in a given area or make permit decisions based on a perceived lack of "need" for additional operations, on who will and will not benefit from a proposed operation, on whether a proposed operation fits the character of an area, or on the popularity of a proposed operation. DEQ is required to evaluate a proposed Opencut mining operation based on the requirements of the Act and rules. Mitigation measures may be required to reduce certain on- and off-site impacts, and this has been done with this application. DEQ is obligated to issue an Opencut permit to the applicant, if the application adequately addresses the requirements of the Act and rules. DEQ believes that potential off-site impacts of this operation would be reasonably mitigated within the limits provided by state law.

TRAFFIC AND SAFETY

Public Comment/Question: Whitefish Stage Road is a bike corridor; children play, school busses use the road daily; the road width and shoulders are not adequate for heavy trucks, and are barely safe for normal automotive traffic. Schellinger must upgrade Whitefish Stage Road for heavier trucks and eliminate the narrow shoulder. There has been one gravel truck fatality already.

DEQ Response: Citizen complaints regarding aspects of the operation discussed in this EA, but over which DEQ has no regulatory authority, would be the responsibility of other governmental agencies to the extent that pertinent laws allow. DEQ does not have the expertise, knowledge, or any legal authority to regulate public roadway design or traffic safety standards. An approach permit allowing and regulating the operator's access to Whitefish Stage Road has been issued for this site by the Montana Department of Transportation since it is a state secondary highway.

Public Comment/Question: Highwalls are undercutting and destabilizing Whitefish Stage Road. The proposed 100-foot highwall will be hazardous to workers and should not be allowed.

DEQ Response: Inspections of the site have not verified the claim that mining activity has in any way destabilized the structural integrity of Whitefish Stage Road. As for the safety issue of working around highwalls, DEQ has no authority in that regard. According to Title 30 of the Code of Federal Regulations, (30 CFR § 77.1006) Highwalls; men working, "(a) Men, other than those necessary to correct unsafe conditions, shall not work near or under dangerous highwalls or banks." Interpretation and implementation of this and other state and federal safety statutes and rules are the responsibility of the operator.

WATER QUALITY

Public Comment/Question: Road salt stored in the pit has showed up in the shallow groundwater aquifer in a monitoring well. Where does it go, into the Whitefish River? The quality of the water in the Whitefish River must be monitored. Just because only one nearby well is in the shallow aquifer, is it OK to allow pollution to occur? Salt in water samples shows pollution in excess of State water quality standards. When was this allowed, and why no violations?

DEQ Response: The Montana Department of Transportation (MDT) previously used a salt/sand mixture that was applied to the highways during the winter months. It is our understanding the mixture was prepared circa 1999. This practice was discontinued after one year. The salt subsequently leached from the stockpile and elevated chloride concentrations have been detected in the downgradient monitoring well in the shallow aquifer. Chloride concentrations have decreased since the January 19, 2003 sampling event. The general groundwater flow direction in the shallow aquifer is to the south-southeast. There are no shallow wells completed in the perched aquifer downgradient to the gravel pit and therefore, no downgradient receptors. All of the existing water supply wells are constructed in the deep artesian aquifer. Recent groundwater samples collected from two domestic wells downgradient of the gravel pit indicate that chloride concentrations are at background levels of 1 mg/L (Applied Water Consulting, 2008). Therefore, the deep aquifer does not appear to be affected.

Public Comment/Question: The Whitefish River is only 200' away from the pit and is in danger of surface water contamination.

DEQ Response: The Whitefish River is now 750 feet east of the closest point of the proposed expansion (See Figure 1 - Area Map, and Section 2 – WATER QUALITY, QUANTITY AND DISTRIBUTION). At the closest, the amended permit boundary would be up on a bench 60 to 80 vertical feet above the river, set back across 750 linear feet of undisturbed forest and grassland, and those disturbances nearest to the river would be mainly seeded soil berms. It is unlikely that surface water runoff would ever reach the river and have any affect on the river's water quality.

Seven water-quality samples were collected along an 8-mile stretch of the Whitefish River as part of the 2008 water-quality monitoring program for the Carlson gravel pit. The results of the laboratory analyses indicate the river chemistry is very consistent and does not show an appreciable change in any parameter throughout this stretch of the river. The results of surface water monitoring done in July 2008 demonstrate that flow from the perched aquifer has no impact on the water quality of the Whitefish River (Applied Water Consulting, 2008).

WILDLIFE

Public Comment/Question: Early morning hours will impact bald eagles that forage during those times along the river corridor. Potential impacts to Bald eagles under the Bald Eagle Protection Act and potential impacts to the Cutthroat trout must be evaluated by the USFWS.

DEQ Response: Bald eagles are no longer threatened or endangered species (USFWS 2008). There are no known bald eagle nests in the vicinity of the proposed mine expansion. The Whitefish River receives transient use by eagles but is no closer than 750' at its closest point to any actual mining. Likewise, the mine expansion would not impact any other surface water or adjacent forest habitat. The mine expansion would cause some loss of pasture land, which is not important habitat for bald eagles. No measurable impacts to bald eagle breeding, feeding, or sheltering are predicted, and thus there would be no consequences to the population. Cutthroat trout are known to occupy the Whitefish River, but no surface water will enter the river from the minesite. Likewise, sampling of the river water quality above, adjacent to and below the mine has shown that the river has not been impacted by this mine.

Public Comment/Question: Elk use has increased in the past two years north of the present minesite. The elk herd must be monitored and reported, and the operator must mitigate impacts.

DEQ Response: In the past two years since Schellinger took over, a growing elk herd is now using the reclaimed Flathead County and Iron Horse minesites that are located just north of the proposed expansion. No hunting is allowed by Schellinger; thus elk have found protected habitat near the pit. Aside from the primary reclaimed use as agricultural land, wildlife habitat was a secondary intended reclaimed use of these older depleted mines (see Section 5 - **TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS**). Re-occupation of the reclaimed and surrounding areas by wildlife is anticipated and would be promoted by the operator (Pers. Comm., Schmidt 2008).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE AND EXAMPLE/GUIDANCE QUESTIONS	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	The expansion area is east of the current permitted site. Geologically, the area is composed of granular materials deposited during the last period of glaciation over 10,000 years ago. Materials to be mined are a mixture of gravels, cobbles, sands and sandy silts up to 100 feet thick (Smith 2004). Mining is proposed to stop at an elevation of 3,000 feet MSL. Below that depth is a layer of fine grained glacial silt and clay. These materials were deposited in distinct horizons and vary in texture. Topographic land forms are consistent with kettle and kame topography, characteristic of the entire northern Flathead Valley floor. Disturbance of additional area will not significantly alter these area land forms. Proposed highwalls will vary in height based on the surface elevations. Highwalls may be as high as 100 feet. The reclamation plan proposes a bench for highwalls which exceed 40 feet in height. The bench would be placed midway between the pit floor and the top of the highwall. The granular matrix appears to be stable at the proposed 3:1 slopes. Placing a bench will reduce the eventual miscellaneous slough at the toe and provide access for slope management activities such as weed control. Average topsoil is six inches with 12 to 18 inches of overburden on top of the gravel resource (Soil Survey). All overburden will be stripped and saved for reuse in reclamation. Overburden will be stockpiled separately from the topsoil. All topsoil will be saved for reclamation. The fine grained silts may be subject to wind erosion. Erosion will be controlled by seeding using the approved seed mix. Soils used in reclamation will be 12 inches of fine grained overburden and six inches of topsoil. All material will be lightly compacted. Final reclamation will consist of disking the seed bed and planting of the approved seed mixture. Eventually the area would be used as pasture for livestock. Portions of the permitted site have been mined and reclaimed. Additionally, the berms along Whitefish Stage have been placed, topsoiled, seeded and trees planted. Some dead trees have been removed and new stock planted, and the rest are scheduled to be replaced. Reclaimed areas are uniform and do not show any indications of slope failure or sloughing.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION:	Local surface water features are either below the elevation of the shallow aquifer or recharged from other sources, such as the Whitefish River. Since storm water does not leave the site, surrounding properties should not be impacted. Further protection is provided by the storm water protection plan included in the Plan of Operation. Storm water runoff from the berms is collected onsite and directed to retention swales in pastures north and south of the active area. Special precautions would be taken to minimize possible contamination of the groundwater. No bulk fuel would be stored within this amendment area. No contaminated soils would be brought to the site. Equipment would be serviced and fueled in the permitted site with the normal precautions to avoid spillage. The high water table of the perched aquifer occurs at an elevation of approximately 2,988 feet amsl (Applied Water, 2008). The base of the mine will be 3,000 feet amsl. As such, there will be twelve feet of separation between the final pit floor and the high water table. This is a common separation distance for other gravel mining operations such as the Tutvedt 2 and Tutvedt 3 pits that are also located in the northern part of the Kalispell Valley. Groundwater monitoring is conducted on an annual basis at the Carlson gravel pit. The results of the July 23, 2008 sampling event indicate that that no volatile organic chemicals (VOC's) were detected in any of the wells with the exception of trace-level concentrations of toluene in wells CGP-3 and CGP-4 at 0.66 and 0.24 µg/L (ppb), respectively. The maximum contaminant level (MCL) for toluene is 1,000 µg/L, which is more than 1600 times greater than the concentrations observed in the two water samples. The laboratory results of the extractable petroleum hydrocarbon (EPH) were

	reported as non-detected for all five samples. EPH analysis is used to evaluate the potential for diesel fuel contamination. In summary, the results of the 2008 groundwater monitoring determined that no regulated compounds were detected in the perched groundwater aquifer with the exception of trace concentrations of toluene. The results of the laboratory analyses from the 2008 monitoring event indicate that chloride, sodium, and TDS concentrations detected in the sample from well CGP-3 are elevated relative to the baseline concentrations and exceed secondary MCL's. Chloride concentrations have decreased since the January 19, 2003 sampling event. This well is completed in sediments that have a low permeability. As a result, the chloride will have a longer residence time and remain in the flow system for an extended duration because of the limited amount of water that can flow through these sediments. There are no domestic wells completed in the perched aquifer downgradient of the mine area and therefore, no downgradient receptors. Water-quality samples were also collected from two domestic wells completed in the deep artesian aquifer that are within the flow path of the groundwater beneath the gravel pit. The wells were sampled to provide background information regarding the existing water-quality conditions of the deep artesian aquifer. In general, the concentrations of the various parameters are lower in the two domestic well analyses than corresponding concentrations for the sample from monitoring well CGP-1. The chloride concentrations in the two domestic wells are essentially 1 mg/L, which is less than the background concentration of 1.5 mg/L. No volatile organic chemicals or extractable petroleum hydrocarbons were detected in either sample. In summary, the results of the domestic analyses are considered to be representative of baseline water-quality conditions for the deep artesian aquifer and are unaffected by mining operations. **Water Rights:** There are two existing water rights for the Carlson gravel pit. Water right no. 76LJ 30003798 is a Provisional Permit for a well completed in the deep artesian aquifer. The water right provides for pumping the well at 250 gpm up to 22.2 acre-feet annually for commercial use at the concrete batch plant or other commercial uses. This water right also allows for irrigating the visual berms around the pit at an annual appropriation of 10.93 acre-feet. The second water right is to appropriate water from the Whitefish River at a pumping rate of 4 cfs (1,795 gpm) up to 135 acre-feet per annum. The purpose of this water right is for industrial use associated with gravel washing operations. These two water rights fulfill the water supply requirements at the Carlson gravel pit.
3. AIR QUALITY:	Reclamation of areas mined out and no longer needed for mining activities is required, and will reduce the opened areas susceptible to blowing dust. Therefore, air quality should not be degraded as a result of adding this area to the permit since little additional particulate matter would be produced during the mining of the resource. The added resource would, however, extend the number of years the existing dust situation would be present. Dozers, loaders, and trucking equipment do cause some dusty conditions in disturbed soil sites, but the operator must comply with existing dust emission standards. Dust would be controlled around the site by water trucks in open areas. The site is not within a Class I airshed but is within a PM 10 particle size buffer zone two miles from the Whitefish nonattainment area (NAA) and four miles from the Columbia Falls NAA. (http://deq.state.mt.us/AirQuality/Planning/airmaps/WhitefishMap.pdf) and (Walsh 2008). Based on the conditions established in the Air Quality Permits for the crusher and the asphalt plant used at this location, the amount of controlled emissions generated by these facilities would not exceed any ambient air quality standard established for any of Montana's attainment or unclassified ambient air quality areas. The limitations and conditions established for these permits in the required attachments called "Addendum #1" further reduce the facility emissions generated while operating in or within 10 km of both the Whitefish and Columbia Falls NAA's and would also be protective of corresponding ambient air quality standards. In addition, these sources are portable and would not remain on site full time. Air quality impacts associated with these regulated, temporary plants will be minimal. Prior actions to mitigate dust include paving the entry road, watering of the internal haul roads and

	active reclamation of mined areas. Particulate emissions from processing in the current permit area are regulated by the Air Resources Management Bureau. Expansion of the permitted area will not alter the particulate levels allowed in batching, crushing, washing or asphalt production. Dust is a common result of gravel pit operations. Because this expansion will progress easterly as other finished areas are reclaimed, the overall disturbed area will never reach the full size of the permit area. Depending on staging, there may be an increase in exposed areas for brief periods of time, until reclamation is completed in mined out areas. Any increase in particulates should be minimized until the seeded areas re-vegetate. **Cumulative Impacts:** Other aggregate mining permit areas within three miles of the proposed Carlson Pit Amendment include the active KL Sandbox sand pit on Dillon Road and Highway 40, the Hamilton Blue Moon Pit and crusher at Highway 40 and LaSalle, the Thornberry Dairy pit and crusher on Conn Road, the Knife River Hodgson pit and crusher and the Thornberry T-Bend pit, crusher and asphalt plant on Hodgson Road, and the Schwarz Trumble Creek Road pit and crusher. Other pits in the three-mile radius are the permitted but undeveloped Knife River Motichka pit, crusher and asphalt plant on Conn Road, the inactive Kauffman and Kerestes pits on Highway 40, the reclaimed Price sand pit on Dillon Road and Highway 40, the reclaimed Stobie sand pit on Hodgson Road, and the depleted but still permitted Flathead County Wishert pit at Wishart and Trumble Creek Roads (see Figure 1 – Area Map). Crushers are permitted but not always present at all but the sand pits and the depleted or inactive pits. The Motichka and T-Bend pits are approved for asphalt plants. The Motichka pit is in the process of being expanded toward the west along Conn Road. Prevailing winds during the summers tend to blow from two primary directions; from the south-southwest and from the north-northeast (see Figure 3 - wind direction charts from Glacier Park Airport,). Wind out of the south, the "lake" effect, tends to blow toward the north with a minor component toward the northeast. These winds can have velocities averaging 11 to 16 miles per hour (disregarding wind gusts). Wind out of the northeast, the "canyon" effect, tends to be the strongest, averaging winds over 21 mph. The largest cluster of pits, crushers and asphalt plants is located over a mile to the east and is not upwind or downwind of the Carlson pit expansion during prevailing wind events, and these sites are therefore not likely to have any effect on or to be affected by the proposed amendment (Walsh 2008).
4. VEGETATION COVER, QUANTITY AND QUALITY:	There are no known rare or sensitive plants in the site area. Vegetation consists of pasture grasses, such as brome, blue grass, and quack grass. Some Ponderosa pine and Douglas fir are present. Existing vegetation would be removed and re-planted with pasture grasses compatible with the area. There are no rare plants or cover types present. The Flathead County Weed Control District has approved a Soil Disturbance and Weed Management Plan for the site proposed for operations. Only weed free seed will be used for reclamation. Periodic spraying for weeds is also required. Adherence to the plan will prevent the spread of weeds. **Cumulative Impacts:** There would be no cumulative impacts to vegetation as a result of the Proposed Action.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	The pre-mine area is used primarily for pasture. Surrounding areas also contain pasture, forest and agricultural land, and some have been converted to residential developments. Mining will cause a change in land use. When reclaimed, the area will again be pasture. Over time, Lodgepole and Ponderosa pine and Douglas-fir will naturally regenerate. Small and large mammals, game and song birds, raptors, insects and other small species will be temporarily displaced by the mining. In the long term the area will be available for habitat. Residential development has permanently displaced the same species. Many of the displaced species are adaptable to the semi-urban environment, but populations and patterns have been altered by the residential intrusions. No substantial populations of displaced species have been identified in the area.

	Bald eagles are no longer federally listed as a threatened or endangered species. Bald eagles remain federally protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Eagles prefer forested areas along rivers and lakes, nest in timber stands, and feed on fish, waterfowl, small mammals and amphibians. Eagles are also known to become accustomed to urban environments. There are no known bald eagle nests in the vicinity of the proposed mine expansion. The Whitefish River receives transient use by eagles but is no closer than approximately 500' at its closest point. Likewise, the mine expansion would not impact any other surface water or adjacent forest habitat. The mine expansion will cause some loss of pastureland, which is not important habitat for bald eagles. No measurable impacts to bald eagle breeding, feeding, or sheltering are predicted, and thus there would be no consequences to the population (USFWS 2008). The proposal is compatible with the National Bald Eagle Management Guidelines (USFWS 2007). Observed elk activity in the vicinity north of the proposed amendment area has increased in recent years. This elk herd has found refuge in and around the two reclaimed minesites located adjacent to the north side of the amendment area, and the improving habitat between the present pit and the Whitefish River. Several factors are probably responsible for this increased use by elk. Firstly, hunting pressure has been reduced since the mining operation was taken over by Schellinger in 2007. No hunting is allowed on the permit or by any employees of the operator or his subcontractors (Schmidt 2008). Elk have instinctively found the minesite to be non-threatening. Secondly, the reclaimed Flathead County gravel pit site and the Iron Horse Topsoil minesite, both located adjacent and north of the existing pit, have been successfully reclaimed to productive agricultural land that provides a safe feeding area for the elk. This feeding area is also adjacent to water and good cover, so it will likely continue to provide strong habitat for the elk even during mining operations in the amendment area. Thirdly, housing subdivision and individual residential home development in this area has encroached into habitat historically utilized by the elk, forcing them onto shrinking safe areas such as the reclaimed mine sites. **Cumulative Impacts:** Expansion of the permitted area will not permanently affect any identified plant or animals in the area. No fish or aquatic species will be impacted by this action.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected. **Cumulative Impacts:** The U.S. Fish and Wildlife Service identifies grizzly bear, Canada lynx, gray wolf, bull trout, and Spalding's Campion (a plant species) as federally listed threatened or endangered species in greater Flathead County. However none of these species are known to frequent or inhabit the site mainly because no suitable habitat is involved. No "critical habitat" for any of these species has been designated or proposed here. It is conceivable that transient grizzly bears or gray wolves occasionally travel through the area, but the proposal would not measurably affect breeding, feeding, or sheltering opportunities for these animals. No wetlands will be impacted. The nearest wetland is the isolated pond northeast of the proposed expansion area. No operations are proposed for the slopes that would run off into this wetland. Other species are listed as being of special concern; none are identified as present at or near the site. Overall, the irreversible change from rural agricultural to residential land use, which is occurring around the area, represents a greater potential for permanent, long term effects to local environmental resources than mining and reclamation.
7. HISTORICAL AND ARCHAEOLOGICAL SITES:	Although there are cultural values in the general area, much of this site has been previously disturbed by modern man by farming. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator would give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation would be routed around the site of discovery for a reasonable time until salvage could be conducted. The State

	Historic Preservation Office would be promptly notified. **Cumulative Effects:** There would be no cumulative impact to historical and archaeological sites as a result of the Proposed Action.
8. AESTHETICS:	The site is located in a scenic, but not unique area. There may be some deterioration of aesthetics while the operation is under way. However, incremental and full term reclamation would return the area to a visually acceptable landscape. Berms have been built along Whitefish Stage Road to deflect sound and to limit visual impacts. They are planted with grasses and small pine or fir trees. The expansion area would be mostly shielded from view by the existing berms and from adjacent residents along the south and east sides by additional berms. **HOURS OF OPERATION:** Hours for all operations are currently from 7:00 am to 7:00 pm, Monday through Friday and anytime Saturday for loading and hauling. Maintenance can occur anytime, day or night. For special projects, hours may be extended for a maximum of 15 consecutive working days from 6:00 a.m. to 10:00 p.m., Monday through Saturday. Extended 15-day periods must be separated by 30 days. Loading, hauling and maintenance can occur anytime during these hours, and emergency sand and gravel for highway safety may occur anytime. Hours of operation for the site would change under the Agency-Preferred Alternative. The changes proposed in this amendment would be to extend Saturday operations from 12:00 p.m. until 5:00 p.m., to eliminate nighttime work and to change the hours of operation for the concrete plant. The amendment would allow the concrete plant and delivery trucks to start up at 5:30 a.m., Monday through Friday, and from 5:30 a.m. to 12:00 p.m. on Saturdays during the summer months of June through September. No operations of any kind, other than emergency winter road sand loading, could occur at night. Sales of concrete need to start earlier in the morning due to the construction trades. Concrete trucks must begin arriving on the jobsites by 6:00 a.m. during the hot summers since cement finishers shut down early when the daytime temperatures are in the 90's and 100's. The applicant has submitted a revised Plan of Operation as specified under Agency Preferred Alternatives, which added a "Quiet Hours" section to include such things as no backup alarms to be used before 7:00 a.m., vehicle speeds leaving the pit will be limited to 10 mph, all concrete plant bins in the batch plant will be filled the night before, and limiting early concrete batch plant operation to a four-month period from June through September. The new Plan also limits nighttime operations, buffers adjacent landowners with a "no activity zone", shortens the life of the mine by 10 years, puts all processing plants down on the pit floor, and limits asphalt and concrete production to summer months. Noise levels generated by a crusher, concrete plant, asphalt plant, dozers, loaders and truck traffic at the pit are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels from ordinary activities such as close conversation are 60 decibels and music from a radio at 70 decibels is considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure to employees on site without hearing protection could lead to hearing loss. The nearest residence is outside the area which would be impacted by dangerous noise levels. The Opencut Mining Act does not include specific standards for noise or light levels. However, the Act does require that noise and visual impacts on residential areas should be minimized to the degree practicable through berms, vegetation screens, and reasonable limits on hours of operation, [82-4-434(2)(o), MCA]. Lighting is limited at the pit during nighttime hours to that which is necessary for worker safety and for security. The concrete plant and wash plant are the two permanent facilities at the site, and they have been placed down inside the pit, under the berms specifically intended to reduce light and other impacts from affecting local residents.

	CUMULATIVE IMPACTS: There are five active sand & gravel operations within a three-mile radius of the proposed amendment area. These sites are not visible, nor are they located on the same highway as the Carlson gravel pit. The nearest operating pit to Carlson is the T-Bend site located over a mile to the southeast. T-Bend is a fully operational gravel and asphalt mixing plant site that is in its declining years as a gravel mine. Reclamation of the pit is underway and is already heavily used by wildlife. The crusher and asphalt plants remain in production and receive most of their gravel by truck from a larger source pit located on Conn Road, two miles east of the Carlson pit. There are no significant cumulative impacts associated with the other gravel pits located to the east of the Carlson pit.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:	There are no unusual demands on land, water, air or energy anticipated as a result of this amendment. A wash plant, which uses water, will continue to operate. The life of the operation will be extended into the future by this amendment, but the volume of water needed for operation on a daily basis will not increase. A water right has been approved for the well serving the wash plant and a second water right from the Whitefish River is available for needed water.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:	There are no other known impacts on environmental resources anticipated as a result of this amendment.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
11. HUMAN HEALTH AND SAFETY:	Heavy equipment and facilities including trucks and loaders will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents. Excessive and prolonged noise and light could impact nearby residents and induce difficulty sleeping, but ongoing operations are not planned for nighttimes. This amendment alters the operating hours of the existing facility to eliminate nighttime work but does add early morning hours for the concrete plant. Impacts to heath and safety anticipated as a result of this proposed amendment would be in the form of longer exposure of local residents to some legal levels of dust and odors further into the future. This proposed amendment should not significantly affect human health. Whitefish Stage Road is a State Secondary Highway. The approach and operations on and to Whitefish Stage are governed by MDT, which has adopted standards for Traffic Mitigation Impact Analysis. Permitting an expansion will not cause an increase in traffic to and from the site. Permitting the expansion will increase the time period of use. Currently the single approach is stop controlled. Site distance for drivers passing by the pit entrance on the highway is adequate for the posted speed, and the approach is paved for a distance of 300 feet back onto the permit to reduce tracking mud and gravel onto Whitefish Stage Road. According to MDT, the recent annual daily traffic (ADT) data and future growth rate projections on Whitefish Stage Road are taken from Flathead County map sheet 4, supplement A, station 47. The 2004 ADT for this site is 1,680 and the annual growth rate is 2.5%. Therefore, the calculated ADT for the year 2022 would be 2620, and for the year 2056 ADT would be 6070

	(Cook, 2008). **CUMULATIVE IMPACTS:** There would be no significant cumulative impacts to human Health and Safety as a result of the Proposed Action.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:	Some of the acreage listed in the Type and Purpose of Action would be taken out of agricultural use and put into industrial/commercial use. Upon completion of mining, the land would be reclaimed to pastureland. Overall in the long term all disturbed areas would be returned to pasture, which is their current use.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:	Existing employees would mainly be utilized for this operation. There is low potential that this amendment would create a significant number of new jobs. Existing jobs at this site would be extended into the future.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES:	Additional taxes may be generated for the county and state in the form of income to the applicant and fuel and highway taxes paid by hauling equipment. Maintaining a competitive supply of aggregate resources could stem the increasing cost to taxpayers of road and highway construction.
15. DEMAND FOR GOVERNMENT SERVICES:	The operation would require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:	City/County zoning clearance has been obtained.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:	No wilderness or recreational areas are nearby or accessed by the public through this tract.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:	The project would not add to the population or require additional housing.
19. SOCIAL STRUCTURES AND MORES:	The area has generally been utilized for commercial and industrial development in the past. This proposal would add more land to this existing aggregate business. The area is underlain by a high quality deposit of sand and gravel and it is predictable that development of the resource would occur.
20. CULTURAL UNIQUENESS AND DIVERSITY:	This area has gradually shifted from forest and agricultural to residential and industrial use. The expansion of the pit could slow the current transition from rural to suburban residential use.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	Schellinger would be required to submit an additional Reclamation Bond as part of its amendment. There would be no infrastructure improvements that would need to be paid for by local, state or federal officials related to the proposed pit amendment. Sale or market value of adjacent property may be negatively affected by the continuation of this gravel pit, but DEQ has no specific information on this issue. The Legislature has specifically limited DEQ's authority to issues relating to taxable value. Under Montana law, an administrative agency, such as DEQ, has only those powers granted to it by the Legislature through enactment of statutes. The Legislature has given DEQ two means of mitigating the effects of gravel operations on adjacent property. First, DEQ has authority to protect air and water quality; to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation; and to otherwise prevent significant physical harm to land or surface water disturbed by Opencut operations, adjacent land, structures, improvements, or life forms. Second, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and re-vegetated.

	The State contracted for a study to determine "…whether the existence of a gravel operation impacts the value of surrounding real property." (Rygg 1998). Rygg's study involved some residential property near two gravel operations in the Flathead Valley. He concluded that these measures were effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division said: "In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing." Some residences have been constructed in the vicinity of this site. A crushing and asphalt batching facility has the possibility of reducing the attractiveness of home sites to potential homebuyers seeking a rural/residential type of living environment. This operation could also affect the marketability of existing homes, and therefore cause a reduction in the number of interested buyers and may reduce the number of offers on properties for sale This reduction in property turnover should not have any long-term effect on taxable value of property. If homeowners believe their property values are decreased because of a gravel operation, they may appeal to the County and the State for tax adjustment. There is a performance bond in place that would allow DEQ to reclaim the land under permit if the operator is unable to do so, which would protect taxable value over the long-term. DEQ is required by law to see that the work is done, as specified in the Plan of Operation.

22. Alternatives Considered:

A. No Action Alternative: Under this alternative the amendment for the Schellinger permit would be denied. The land would remain as pasture or hay land until other uses of the land were proposed and implemented. Carlson would be denied full utilization of this property.

B. Proposed Action: Under this alternative the amendment would be approved as described. The operation would increase in size from 67.2 to 156.3 acres over a period of 48 years with reclamation following in depleted areas. An additional 9,300,000 cubic yards, would be excavated and removed from the site, and the date of final reclamation would be extended from 2022 until 2056. Hours of operation would be changed to allow early start up for the concrete plant only at 5:30 a.m. Monday through Saturday. Saturday concrete plant operation would shut down at 12:00 p.m.

C. Agency Preferred Alternative: Under this alternative the proponent would revise his Plan of Operation to reduce impacts discussed above. Changes would include:

- A "Quiet Time" plan for operating only the concrete batch plant during the early morning hours between 5:30 a.m. and 7:00 a.m. prior to normal business hours. The plan would specify four conditions under which the concrete batch plant could operate:
  - (1) All sand, cement and rock bins must be filled the night before to eliminate morning front-end loader activity.
  - (2) Truck traffic must not exceed 10 mph anywhere inside the permit perimeter. No compression brakes will be allowed during this time.

(3) Back up alarms must be shut off and an alternative safety program must be used for vehicle safety when backing up.

(4) Early hours for the concrete plant only apply during the summer months between June 1st and September 30th.

- Phase 5 will be pulled back such that mining will come no closer than 750 feet from the Whitefish River.
- Asphalt batch plant operations will not begin prior to April 15th and run no later than November 15th of each year.
- Maintenance will only be preformed during approved hours of operation to eliminate late night work.
- Change the date of final reclamation from the year 2056 to 2046. This would extend the closure date from the currently approved year 2022 by 24 years instead of 34.
- Berms surrounding the south and east sides will be built to provide maximum visual and audible shielding as discussed with affected adjacent residents. The berms will be constructed, contoured, and covered with topsoil. The berms will be seeded and irrigated to maintain their appearance. After mining operations cease, the berm material will then be used for reclamation.
- All road sanding material produced or stored at the site will be free of artificially introduced salt unless it is stockpiled on a sealed asphalt, concrete or impermeable membrane pad with a drainage sump capable of holding all snow melt and rain events. All captured water will be removed from the site and disposed of in an approved site and manner.
- The use of "jake" (engine compression) breaks will not be allowed during early morning hours.
- The hours of operation for all other work besides the concrete plant will be specified to reduce nighttime noise. The new hours of operation will be 7:00 a.m. to 7:00 p.m., Monday through Friday, 7:00 a.m. to 5:00 p.m. on Saturdays for all activities except for the concrete plant, which will be allowed to operate as specified above during early morning hours starting at 5:30 a.m. during the summer. No mining, maintenance or hauling will occur at night.
- All crushers, asphalt plants and other processing equipment will be operated down on the floor of the pit to reduce sight and sound impacts on local residents and to traffic along the Whitefish Stage Road.
- No crushing and washing operations will take place within 600 ft. of any property line where the Carlson family is not the primary owner.
- Concrete and asphalt processing facilities will not operate in the amendment area but will be limited to the existing permit areas.
- A 'no activity zone' will be created along the south and east sides of the amendment area; this zone will be a minimum of 100 ft. wide and parallel to the southern and eastern border of the site where the Carlson family does not own adjacent property. In this area no mining or reclamation operations will be permitted. Site and sound berms would be constructed within a 100 ft reclamation corridor, which will parallel the 'no activity zone'. Within this corridor no mining operations would be conducted and this material would only be utilized in the reclamation process for slope construction and backfill. The berm would vary from 8 to 15 ft in height with irregular shaping and contours. Berms would be seeded with grasses as specified in the reclamation plan and have various varieties of trees and shrubs planted intermittently to better match the existing berm.

23. Public Involvement, Agencies, Groups or Individuals contacted: Flathead County Planning Department, Flathead County Commissioners, MDT Traffic Data Collection & Analysis, US Fish & Wildlife Service, and Montana Fish, Wildlife & Parks. The DRAFT Environmental Assessment was posted on the DEQ website and a notice describing its availability was mailed to a list of individuals who expressed interest in the last amendment, and was advertised in the Daily Inter Lake newspaper requesting comments until Friday, June 27, 2008. Email notices were also sent to a limited number of interested parties.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed: Flathead County Planning Department (zoning clearance), Flathead County Weed Control Board (weed control plan approval), DEQ Air Resources Management Bureau (air quality permits), Department of Natural Resources and Conservation (water rights permits), MDT (Approach Permit).

25. **Magnitude and Significance of Potential Impacts:** The proposed Carlson amendment would have long-term but non-significant impacts from the removal of additional gravel at the proposed site. The removal of the gravel would be irreversible and irretrievable. There would be no impacts on any surface waters as there would be no surface water discharges. There is a water right to appropriate water from the Whitefish River at a pumping rate of 4 cfs (1,795 gpm) up to 135 acre-feet per annum; however, there would be no impact on water flow in the Whitefish River due to withdrawals of water for operational needs. Impacts to groundwater would be minimal, as water would be withdrawn through approved wells for operational water needs. All fuels stored on site would be contained with secondary containment to minimize the risk of fuel spills getting into the groundwater. Schellinger has air quality permits for the crusher and asphalt plant and appropriate dust suppression equipment is used on these facilities. Water would be used to control dust within the plant area and on the access road. The berms surrounding the gravel pit are vegetated, which helps control dust off the berms and helps to mitigate visual and sound quality impacts. Impacts to wildlife would be temporary since the pit would be reclaimed to pasture once gravel operations ceased. Given the large expanse of open and undisturbed lands north and east of the site, the proposed operation is not anticipated to have significant impacts to any wildlife species. Truck traffic from the pit would not add to the daily traffic load on Whitefish Stage Road, since activity levels would be unchanged. It would, however, continue to have impacts on local traffic longer into the future.

26. **Regulatory Impact on Private Property:** The analysis conducted in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application nor restrict the use of private property so as to constitute a taking. The mitigations imposed in the Agency Modified Alternative are necessary to comply with the visual and noise mitigation requirements of the Opencut Mining Act.

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RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐ EIS ☐ MORE DETAILED EA ☒ NO FURTHER ANALYSIS

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA:

1) Tom Ellerhoff, Science Program Manager.
2) Vickie Walsh, Air Quality Permitting Supervisor.
3) Ben Conard, USFWS Wildlife Biologist.
4) Calvin Cook, MDOT Statistician.

Written By:	**Rod Samdahl, Environmental Science Specialist**
Reviewed By:	**Neil Harrington, Chief, IEMB**

Figure 1 - Area Map

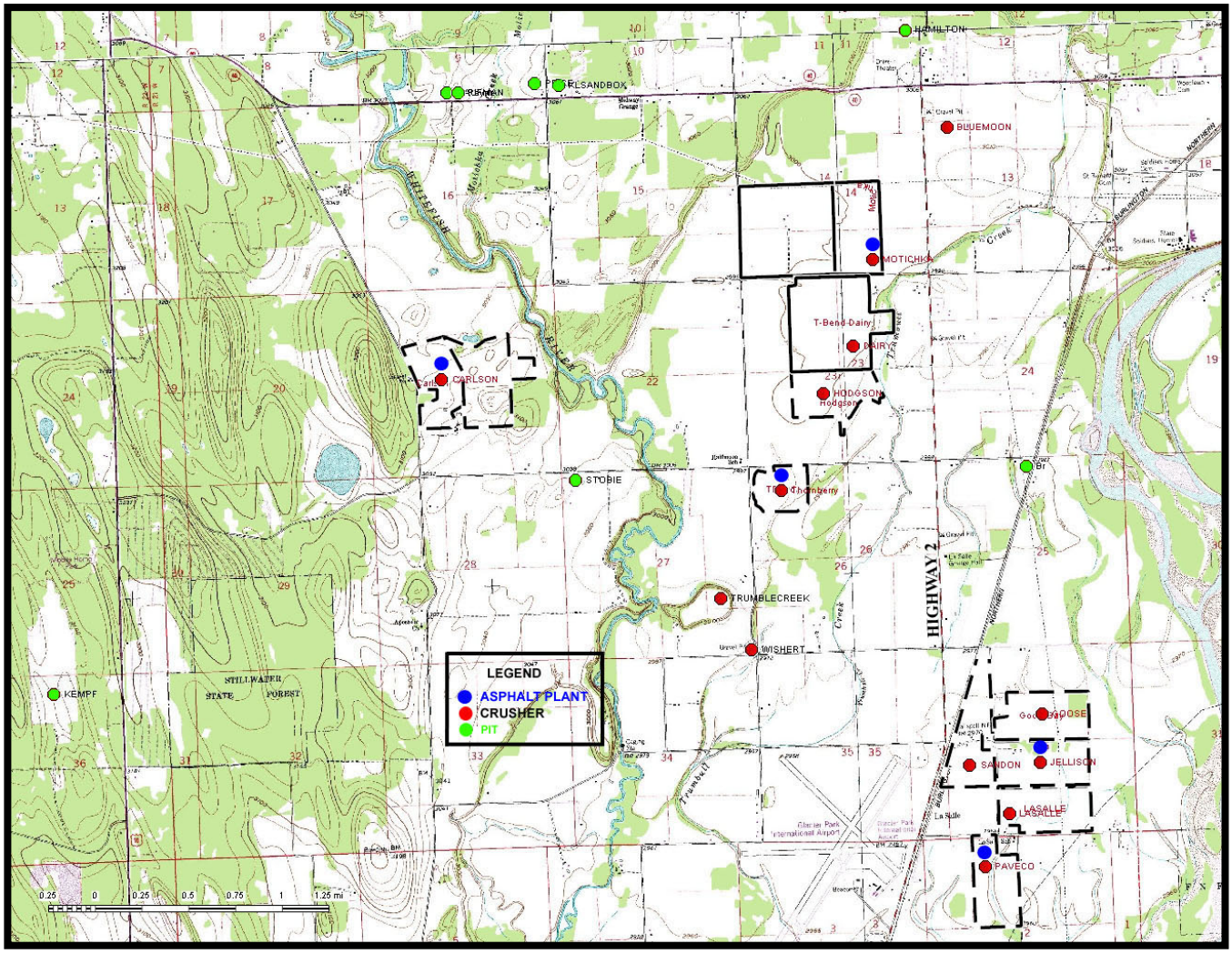


Figure 2 – Site Map

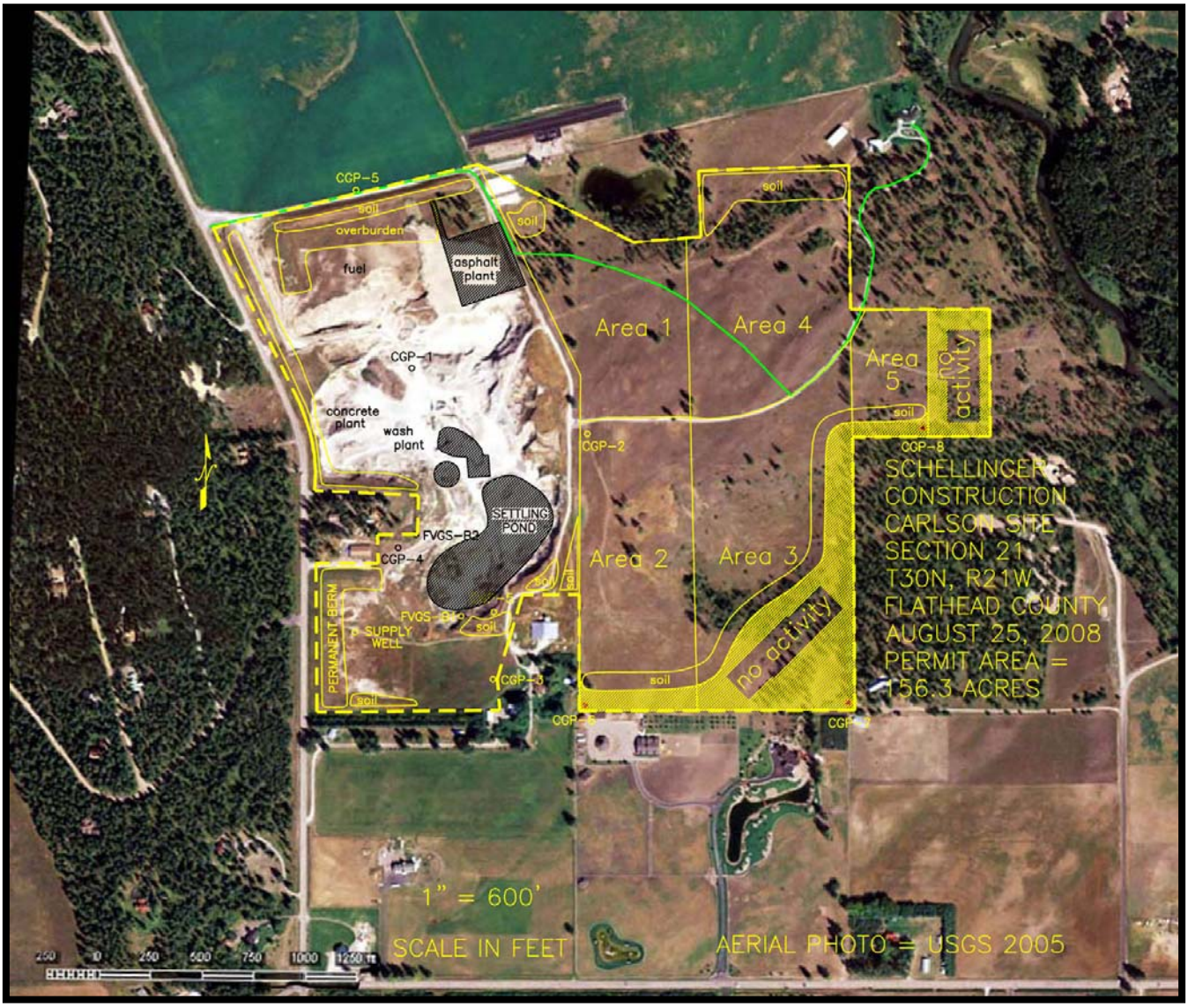
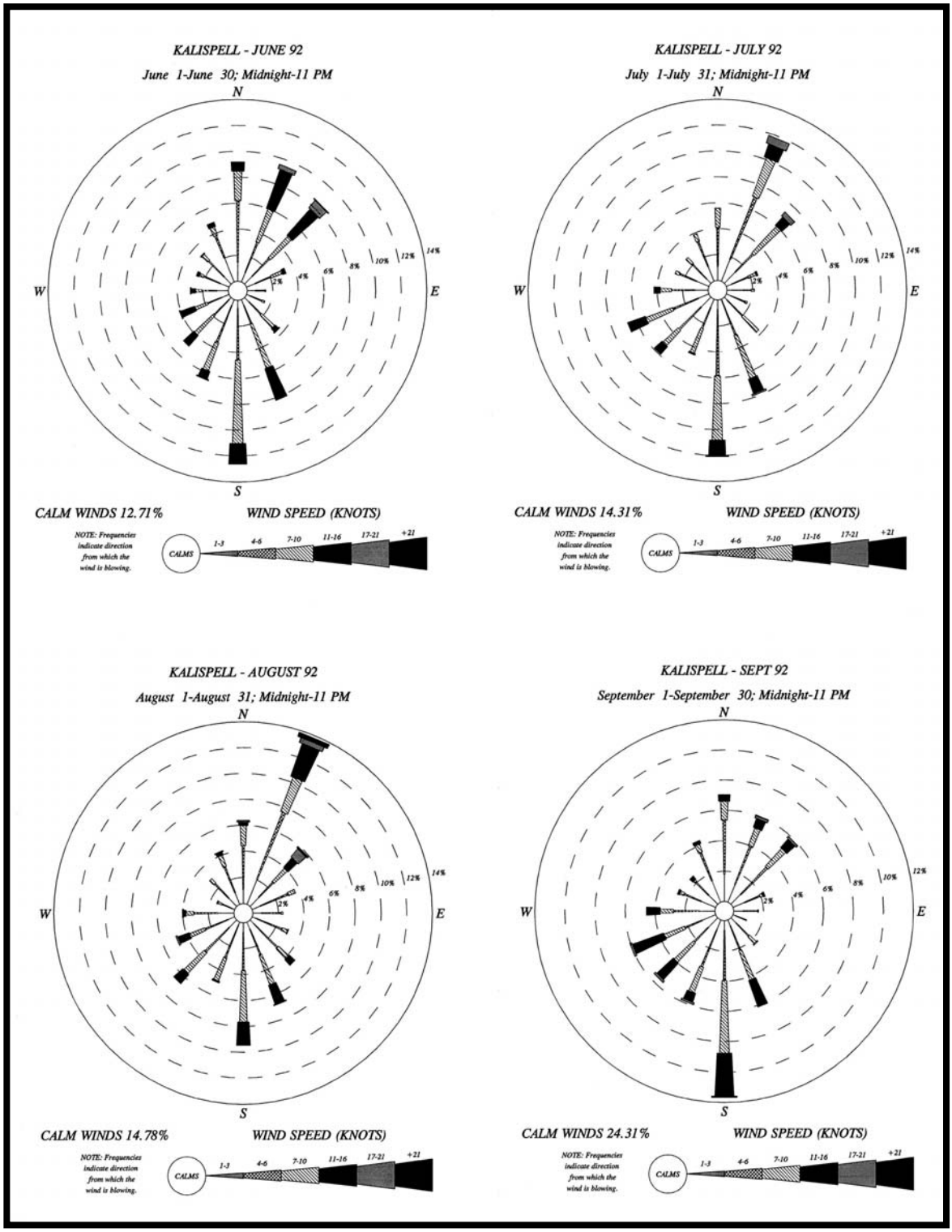


Figure 3 – Glacier Park International Airport Wind direction Charts



PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

PROPERTY DESCRIPTION: Section 21, T30N, R21W, Flathead County

COMPANY NAME: Schellinger Construction, Carlson Site

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.